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See 37 C.F.R. §§ 1.27 AND 1.28

### Complete if Known

Application Number 09/783,770

Filing Date February 14, 2001

First Named Inventor Andrew Harvey

Examiner Name Chad Zhong

Group/Art Unit 2154

Attorney Docket No. 50325-0509

TOTAL AMOUNT OF PAYMENT (\$ ) 500.00

### METHOD OF PAYMENT (check one)

1. ☒ Throughout the pendency of this application, please charge any additional fees, including any required extension of time fees, and credit all overpayments to deposit account 50-1302. A duplicate of this sheet is enclosed.

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Hickman Palermo Truong & Becker, LLP

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### FEE CALCULATION (continued)

#### 3. ADDITIONAL FEES

Large Entity Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet.	
1251	120	2251	60	Extension for reply within first month	
1252	450	2252	225	Extension for reply within second month	
1253	1,020	2253	510	Extension for reply within third month	
1254	1,590	2254	795	Extension for reply within fourth month	
1255	2,160	2255	1,080	Extension for reply within fifth month	
1401	500	2401	250	Notice of Appeal	
1402	500	2402	250	Filing a brief in support of an appeal	500.00
1452	500	2452	250	Petition to revive - unavoidable	
1453	1,500	2453	750	Petition to revive - unintentional	
1501	1,400	2501	700	Utility issue fee (or reissue)	
1502	800	2502	400	Design issue fee	
1504	300	2504	300	Publication Fee	
1462	400	1462	400	Petitions Director not specifically provided for Group I	
1463	200	1463	200	Petitions Director not specifically provided for Group II	
1464	130	1464	130	Petitions Director not specifically provided for Group III	
1806	180	1806	180	Submission of information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	790	2809	395	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	790	2810	395	For each additional invention to be examined (37 CFR § 1.129(b))	
Other fee (specify) _____					
Other fee (specify) _____					

### FEE CALCULATION

#### 1. BASIC FILING FEE

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1011	300	2011	150	Utility filing fee	
1111	500	2111	250	Utility Search fee	
1311	200	2311	100	Utility Examination fee	
1081	250	2081	125	Utility Application Size Fee	
1005	200	2005	100	Provisional Application Fee	
1085	250	20835	125	Provisional Application Size Fee	
SUBTOTAL (1)					(\$ ) 0.00

#### 2. EXTRA CLAIM FEES

	Highest Paid Claims	Extra Claims	Fee from Below	Fee Paid
Total Claims	-20**=	0	50.00	0.00
Independent Claims	-3**=	0	200.00	0.00
Multiple Dependent				

\*\*or number previously paid, if greater; For Reissues, see below

Large Entity Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description
1202	50	2202	25	Claims in excess of 20
1201	200	2201	100	Independent claims in excess of 3
1203	360	2203	180	Multiple dependent claim, if not paid
1204	200	2204	100	**Reissue independent claims over original patent
1205	50	2205	25	**Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$ ) 0.00

\*Reduced by Basic Filing Fee Paid

SUBTOTAL (3)

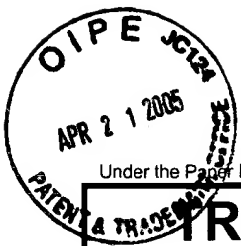
(\$ ) 500.00

### SUBMITTED BY

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Signature		Date	April 18, 2005		

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**TRANSMITTAL  
FORM**

(to be used for all correspondence after initial filing)

<b>Application Number</b>	09/783,770
<b>Filing Date</b>	February 14, 2001
<b>First Named Inventor</b>	Andrew Harvey
<b>Group Art Unit</b>	2154
<b>Examiner Name</b>	Chad Zhong
<b>Attorney Docket Number</b>	50325-0509

**ENCLOSURES (check all that apply)**

<input checked="" type="checkbox"/> Fee Transmittal Form (1 pg) <input checked="" type="checkbox"/> Fee in the sum of \$500.00 Attached <input type="checkbox"/> Amendment / Response <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s)  <input type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition To Convert To a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, number of CD(s) _____	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input checked="" type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input type="checkbox"/> Other Enclosure(s) (please identify below): <div></div> <div></div> <div></div>
<b>Remarks</b> <div></div>		

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm or Individual name	Hickman Palermo Truong & Becker LLP
Signature	
Date	April 18, 2005

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I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class: mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this date:			
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of:  
Andrew G. HARVEY  
(Appellant)

Confirmation No.: 2267

Group Art Unit No.: 2154

Serial No.: 09/783,770

Examiner: ZHONG, Chad

Filed: February 14, 2001

For: METHOD AND APPARATUS FOR MAPPING  
NETWORK EVENTS TO NAMES OF  
NETWORK DEVICES

**Mail Stop Appeal Brief – Patents**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**APPELLANT'S APPEAL BRIEF**

Sir:

Applicant/Appellant hereby submits this Appeal Brief in support of the Notice of Appeal filed, with Certificate of Mailing by first class mail under 37 CFR 1.8, on February 16, 2005. As the two-month due date for an appeal brief fell on a Saturday in this case, Applicant is timely filing this appeal brief on Monday, April 18, 2005.

**I. REAL PARTY IN INTEREST**

Cisco Systems, Inc., which owns the assignee Cisco Technology, Inc., both of San Jose, California, are the real parties in interest.

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: **Mail Stop Appeal Brief – Patents**, Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450

on April 18, 2005

by

Christopher J. Palermo

50325-0509

## **II. RELATED APPEALS AND INTERFERENCES**

Appellants are unaware of any related appeals or interferences.

## **III. STATUS OF CLAIMS**

Claims 2-4, 6, 7, 18-27, 29, 30, 41-46, 48, 49, 60-62 and 64 are pending in this application, were finally rejected and are the subject of this appeal. Claims 1, 5, 8-17, 28, 31-40, 47, 50-59, and 63 were canceled during prosecution.

## **IV. STATUS OF AMENDMENTS**

No amendments were filed after the Office Action mailed November 18, 2004.

## **V. SUMMARY OF CLAIMED SUBJECT MATTER**

Claims 21, 22, 23, 24, and 64 are independent. These independent claims recite similar limitations, except in the context of a method, a computer-readable medium (Claims 22, 64), and an apparatus (Claims 23, 24). Claim 21 is the broadest main independent claim and the focus of the remarks herein.

The independent claims provide a solution to a problem arising in network management. FIG. 1B shows an example embodiment. A packet-switched network 218 comprising routers and switches may interact with a network management system that manages information representing the routers and switches. For administrative convenience, the routers can be categorized in named groups, e.g., group "CONFIG.A" and "VPN.BC" of FIG. 3. Further, certain routers 206A or switches can subscribe to events that are published on a software event bus 202 by other routers and switches. However, in a large network, keeping track of which routers and switches have been subscribed to various events can be difficult. The independent claims provide a way to automatically subscribe a first router to events of interest, when the first router is in the same group as a second router that is already subscribed.

In particular, Claim 21 recites a method of automatically subscribing a router in a network to a plurality of events that are applicable to a logical group of which the router is a member. Claim 21 recites creating and storing a mapping that associates a plurality of routers with a logical group and that associates the logical group with one or more events that can pass over an event bus to which the router communicates. Table 1, page 8 of the specification, provides an example mapping, and FIG. 5 shows a data structure that can be used. A subscribe request is received from the router, and includes a router identifier that uniquely identifies the router and an event identifier. The router identifier and the event identifier are looked up in the mapping. A subject list is received in response to the subscribe request, and the subject list identifies all subjects to which the router should subscribe. The process concludes by sending information to the event bus that requests the event bus to subscribe the router to all events in the subject list. As a result, the router is automatically subscribed to pertinent events. FIG. 7 illustrates messages that are transferred in an embodiment of the process.

Claim 23 is a means-plus-function claim. The means for creating and storing a mapping that associates a plurality of routers with the logical group and that associates the logical group with one or more events that can pass over an event bus to which the router is logically coupled, means for receiving a device identifier of one of the routers in the logical group, means for receiving an event that is among the one or more events that are in the mapping, and means for, based on the mapping, sending information to the router that causes the router to receive all events that are associated in the mapping with the logical group in which the router participates, all correspond to namespace mapping service 210 and its functions as described in the specification at pp. 7-18.

Claim 64 recites details of functions that can be implemented in an application programming interface (API) to provide an event mapping service. FIG. 4 and pp. 10-12 describe an example implementation. The event mapping service provides functions that application programs can call or invoke to perform automatic creation of event-device-group mappings, and to perform automatic subscription.

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

The ground of rejection presented for review is that Claims 21, 2-7, 18-24, 25-30, 41-49, 60-62, and 64 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Amberden, U.S. Patent Application Publication 2002/0103818, in view of alleged “applicant admitted prior art” (termed “AAPA” in the Office Action).

## **VII. ARGUMENTS**

### **A. Introduction**

The citations to Amberden relied upon in the Office Action do not, in fact, teach the claimed subject matter. In rejecting the independent claims, the Office Action improperly relies on “applicant admitted prior art” without adequately identifying where the application allegedly contains admissions. The rationale stated in the Office Action for combining Amberden with “applicant admitted prior art” derives from impermissible hindsight based on Applicant’s disclosure. Even if the combination of Amberden with “applicant admitted prior art” is based on a proper rationale, the combination does not provide the claimed invention. In addition, the dependent claims are allowable. For all these reasons, the rejection should be reversed.

**B. The Office Action's Comparison of Claims 21-24 to Amberden and "AAPA" Is Wrong**

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**1. The Office Action's Reliance on "AAPA" Is Improper**

To establish a *prima facie* case of obviousness under 35 U.S.C. §103(a), the references cited and relied upon must teach or suggest all the claim limitations. In addition, a sufficient factual basis to support the obviousness rejection must be proffered. *In re Freed*, 165 USPQ 570 (CCPA 1970); *In re Warner*, 154 USPQ 173 (CCPA 1967); *In re Lunsford*, 148 USPQ 721 (CCPA 1966). The Office Action fails to satisfy these criteria for the rejections of the independent claims, including Claim 21-24. (The following discussion focuses on Claim 21; the same arguments apply to all independent claims.)

A prior Office Action contended that Amberden anticipated Claim 21 under 35 U.S.C. §102(a). In reply, Applicant argued that a proper anticipation rejection must show that each and every element, step or limitation of a claim is found in a single reference, in the same combination as claimed. (Reply to Office Action, filed Oct. 13, 2004, at 13.) Applicant pointed out that the former Office Action contended that various teachings of Amberden were "the same as" something in the claims, meaning "similar," rather than "identical." Apparently conceding that an anticipation rejection requires identity, that a reference that "almost" discloses what is claimed is legally insufficient to support a §102 rejection, and that Amberden does not teach identical subject matter, the present Office Action now argues Amberden under §103 in combination with "AAPA." However, the reliance on "AAPA" is improper.

The Office may rely upon admissions by an applicant only under extremely narrow circumstances. An admission may establish knowledge of the invention by others or public use or sale. MPEP §706.02(c). A statement by an applicant during prosecution identifying the work of another as "prior art" is an admission that the work is available as prior art against the claims.

Similarly, where the specification identifies work done by another as “prior art,” the subject matter so identified is treated as admitted prior art. *See* MPEP §2129 (citing cases). Thus, an applicant must actually admit that something is “prior art” for that something to qualify as “applicant admitted prior art.”

In this case, however, the Examiner apparently takes a far more expansive view. As best as Applicant can determine, the Examiner contends that everything in the Background section of the application is “applicant admitted prior art.” This is incorrect as a matter of law. Applicant has not labeled drawings in the application as “prior art.” Applicant does not use the term “prior art” to refer to anything in the application. Consequently, the application contains nothing that can properly be deemed as “applicant admitted prior art.”

The Office Action adopts the theory of “applicant admitted prior art” merely to convert a failed §102(a) rejection into one under §103. The weakness of this approach is apparent in that the substantive arguments of the Office Action are unchanged,<sup>1</sup> and do not overcome Applicant’s traversal arguments, as discussed in the next sections. Indeed, the Office Action’s citation of “applicant admitted prior art” implies that the Examiner searched but could not find pertinent documentary prior art. Because the application contains no admission of prior art, and the citation of “applicant admitted prior art” is merely a semantic game to support a rejection under §103 when none is available under §102, the rejection should be reversed.

## **2. The Rejection Relies on Impermissible Hindsight**

As stated by the Court of Appeals for the Federal Circuit, “[t]o imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of hindsight

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<sup>1</sup> Indeed, nearly all of the present Office Action is a cut-and-paste copy of the previous two Office Actions.



syndrome where that which only the inventor taught is used against its teacher.” *W. L. Gore & Assocs v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

The Federal Circuit has recently reiterated that “the tests of whether to combine references need to be applied rigorously.” *McGinley v. Franklin Sports Inc.* 262 F.3d 1339, 60 USPQ2d 1001, 1008 (Fed. Cir. 2001). Broad, conclusory statements regarding the teaching of multiple references, standing alone, are not “evidence” (*McElmurray v. Arkansas Power & Light Co.*, 995 F.2d 1576, 1578, 27 USPQ2d 1129, 1131 (Fed. Cir. 1993)), and a general relationship between fields of the prior art references is insufficient to suggest the motivation to combine such references (see *In re Dembiczak*, 175 F.3d 994, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999)).

The Office Action contends that it would have been obvious to combine Amberden with “applicant admitted prior art” to result in the subject matter of Claim 21, because:

“AAPA discloses a distributed system lacking centralized group control and administration. [Amberden teaches] centralized control of notification to various devices via subscription. Hence, it would have been obvious ... to apply [Amberden’s] teaching to the prior art router system because it would have enabled centralized control of event distribution to the routers.”

Office Action, page 3, paragraph 6. Here, the Office Action rests its §103 rationale to combine Amberden squarely on the terms of Applicant’s own disclosure. This contention constitutes *per se* application of impermissible hindsight. Further, the rationale relies upon a factual misstatement from Amberden. Amberden has no teaching of “centralized control of notification to various devices via subscription”; not surprisingly, the Office Action does not cite a paragraph of Amberden to support its contention. The paragraphs of Amberden on which the Office Action

relies to show subscription—[0213], [0214], [0227]—merely state broad alleged advantages of the Amberden system but say nothing about devices, events, or subscription.

Moreover, the Office Action statement is conclusory and does not meet the standard for an obviousness rejection under 35 U.S.C. §103(a). The stated goals are so general and vague that they cannot rationalize the specific invention that is claimed. It is well-settled that “[i]t is impermissible to use the claimed invention as an instruction manual or ‘template’ to piece together the teachings of the prior art so that the claimed invention is rendered obvious” and that “[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention” (*In re Fritch*, 972 F.2d 1260, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992); quoting *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988)).

### **3. Amberden Does Not Describe the Claimed Subject Matter**

While the Office Action cites a paragraph of Amberden for each step and limitation of Claim 21, the citations are manifestly incorrect. The paragraphs of Amberden cited in the Office Action do not address the same problem domain. Amberden is not even from the same technical field, network management.

Applicant previously argued that the paragraphs of Amberden cited in the Office Action do not use concrete, specific terms of the claim such as “router,” “event bus,” “logical group of which a router is a member,” and “subject list.” The Office Action *agrees*—admitting that “Amberden does not explicitly mention the term ‘router’”—but then contends that the terms of the claim are simply unimportant, because “the type of device would have been a matter of design choice, it would achieves similar means to solve the same problem of grouping devices and identification of events ...” (Office Action, page 3, paragraph 6.)

The Applicant is aware that the Office adheres to a policy of interpreting claim terms as broadly as is reasonable. However, this policy and the overwhelming body of case law do not permit the Office to ignore express terms of a claim, or to re-cast the claim in terms selected by the Office and then examine the re-cast claim. When the term “router” appears in a claim, the Office may not treat the term as equivalent to “Bessemer converter,” “photocopier,” or whatever else happens to appear in a reference; the references must show or suggest what is claimed. Further, a reference is not made of clay that can be stretched and molded into whatever the Office wants the reference to say, in the guise of “interpreting” the reference and claims in “broad” terms.

The rejection of Claim 21 founded on Amberden, as stated in the present Office Action, glosses over specific terms recited in the claim and relies on an over-reaching reading of Amberden that is unfair to the Applicant and that mocks the requirements of the statute, rules and case law.

a.       **Mapping of Routers to Groups and Group to Events.** Claim 21 recites “creating and storing a mapping that associates a plurality of routers with the logical group and that associates the logical group with one or more events that can pass over an event bus to which the router communicates.” The Office Action contends that this feature is shown in Amberden at p. 5, [0066]. This is incorrect. [0066] describes storing file data and database data, and indexing the data according to a class and types. The claim does not recite storing and indexing data generically. The claim recites a mapping that associates routers to a group and the group to events on an event bus. To support a §103 rejection, the Office Action must show that the reference teaches or suggests exactly what is claimed, alone or in combination with other references or knowledge. Instead, the cited teaching is a generic reference to indexing data.

The Applicant has previously pointed out that Amberden lacks the recited mapping. The response of the Office Action, at pp. 6-8,<sup>2</sup> does not contest this point. Since the Office has made no showing the Amberden discloses the specific mapping recited in Claim 21, the §103 rejection is unsupported, and Claim 21 should be allowed.

The responsive argument of the Office Action at pp. 6, paragraph 21, pertaining to “logical groups,” is incorrect and immaterial. The argument is incorrect with respect to Claim 21, because the claim recites routers and not network computers. The network computers of Amberden cannot be considered “essentially network devices,” as the Office Action contends, in the absence of some suggestion for that interpretation. The argument also is immaterial because Amberden lacks the mapping recited in Claim 21. Whether Amberden has some form of groups is unimportant because Claim 21 does not claim groups alone, but a particular kind of mapping. Moreover, [0043]-[0044] of Amberden merely say that the Amberden “data repository portal” can run on a computer; there is no teaching that computers are placed in logical groups for management. Amberden’s description of groups at page 8 is likewise immaterial because Amberden has no suggestion to use groups in the way recited in Claim 21. The mere presence of the term “group” in a computer-related reference is insufficient to constitute a suggestion of the claimed subject matter.

**b. Event Bus to which Router Communicates.** Claim 21 recites “an event bus to which the router communicates.” In responsive argument, the Office Action contends at pp. 7-8, paragraph 24, that Amberden describes an event bus in the form of a hardware bus on the motherboard of the portal/gateway, or does not describe an event bus but must have one. This is incorrect and represents an interpretation of Amberden that is over-broad

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<sup>2</sup> These pages are a verbatim copy of pp. 11-14 of the prior Office Action. The Applicant’s prior reply traversed these arguments again. The Examiner has not seriously attempted to consider and reply to Applicant’s substantive

to the point of being preposterous. The term “event bus” has a well-understood specific meaning in the network management field. It refers to a software middleware component and not a hardware bus. Applicant’s specification identifies such event bus examples clearly (e.g., pp. 1, 6). To contend that a signal on a hardware bus in a server is the same as a software event published by a router to an event bus to which the router subscribes, as claimed, is to adopt an interpretation that no reasonable person of skill in the art would adopt based on the totality of Applicant’s disclosure. It also completely ignores the well-established principle of claim interpretation that claims are interpreted in light of the specification.

**c. Subscribe Request with Router Identifier and Event Identifier.**

Claim 21 recites “receiving a subscribe request from the router that includes a router identifier that uniquely identifies the router and an event identifier.” The Office Action contends that Amberden discloses such a feature at pp. 7-8, [0143], [0148], [0149], [0153], [0155]. This is incorrect. [0143] describes a repository API, a repository database, and a file repository; it contains nothing about a request and indeed not a single word corresponding to terms of the claimed step. [0148] describes a database schema. [0149] describes a metadata store or “stream table,” and while certain identifiers are mentioned, there is no teaching of a subscribe request. [0153] refers to a stream identification number, but this number merely identifies a stream record or entry and does not identify a router or an event; it also is not used in an event subscription request. [0155] describes an “Ownership Group” that contains various other ID fields that do not relate to routers or events and are not used in event subscription requests.

In responsive remarks, the Office Action contends, at pp. 8, paragraph 25, that owner IDs in tables 2.7, 3.1 correspond to device identifiers. This is incorrect and immaterial. It is incorrect because the “streams” of Amberden cannot be honestly analogized to devices in a packet-

switched network. Streams, for Amberden, represent an association of file references and data references for files and data in a repository, Web access to which is regulated by the Amberden system (see FIG. 6). Further, the “owner” of a stream is a user who created the data in the repository. The only characteristic shared by a router identifier and event identifier as claimed, and the owner ID of Amberden, is that they are unique identifiers of *something*; but that similarity alone is insufficient for Amberden to teach *the claimed step* or the *claimed invention as a whole*. The contention of the Office Action is immaterial because the claim recites an event subscription request that contains a router identifier and event identifier, and the cited tables do not involve an event subscription request. The details of the claim cannot be “read into” Amberden.

**d. Looking Up the Router ID and Event ID in the Mapping.**

Claim 21 recites “looking up the router identifier and the event identifier in the mapping.” The Office Action contends that Amberden shows this step at p. 11, [0213]. This is incorrect. [0213] describes alleged advantages of the Amberden system such as simplicity. No look-up step is described. No mapping is referenced.

**e. Receiving a Subject List of Subjects for the Router.** Claim 21

recites “receiving a subject list in response thereto, wherein the subject list identifies all subjects to which the router should subscribe.” The Office Action contends that Amberden shows this step at p. 11, [0213], [0214]. This is incorrect. [0213] describes alleged advantages of the Amberden system such as simplicity. [0214] states how repository APIs supposedly simplify access to streams for search and retrieval. No look-up step is described. No mapping of the type claimed is referenced.

**f. Sending Information to Event Bus for Subscribing the Router.**

Claim 21 recites “sending information to the event bus that requests the event bus to subscribe the router to all events in the subject list.” Thus, in an embodiment, a router that is in a group, but not subscribed to all events associated with the group, is automatically subscribed to those events. The Office Action contends that Amberden shows this step at p. 11, [0213], [0214], [0227]. This is incorrect. [0213] describes alleged advantages of the Amberden system such as simplicity. [0214] states how repository APIs supposedly simplify access to streams for search and retrieval. [0227] defines a portal in the terms of Amberden. No look-up step is described. No mapping of the type claimed is referenced.

The Office Action cannot reasonably contend that any of the foregoing specific claimed steps are found in the cited parts of Amberden, or anywhere else. Nothing in the alleged “applicant admitted prior art,” or any other reference of record, teaches the claimed subject matter that is missing from Amberden. For at least all of the foregoing reasons, a §103 obviousness rejection of Amberden is unsupported. Reconsideration and allowance of claim 21 are respectfully requested.

**C. The Dependent Claims Are Allowable**

Claims 2-4, 6-7, and 18 depend from Claim 21. By virtue of dependency, Claims 2-4, 6-7, and 18 include each any every step, feature and limitation of Claim 21. Because the proposed combination of references, Amberden and “AAPA,” fail to teach, disclose or suggest Claim 21, the references necessarily cannot suggest the subject matter of Claims 2-4, 6-7, and 18. Therefore, Claims 2-4, 6-7, and 18 are allowable for the same reasons set forth above with respect to Claim 21.

Claims 22-27, 41-46, 48-49, 60-62 recite subject matter that corresponds to Claim 21, but in alternative preamble form including computer-readable medium form and apparatus form. Thus, the substantive scope of Claims 22-27, 41-46, 48-49, 60-62 corresponds to Claims 21, 2-4, 6-7, and 18. Accordingly, Claims 22-27, 41-46, 48-49, 60-62 are allowable for the same reasons given above for Claims 21, 2-4, 6-7, and 18.

**D. Amberden Fails to Disclose Claim 64, Featuring a Mapping Runtime Service**

Claim 64 recites a mapping service runtime comprising an API that includes an attach operation that allows a client application program to open a persistent connection to the mapping service runtime; the attach operation receives a parameter and an application context that is used to determine what is available to the client application. The Office Action contends, at p. 5, paragraph 20 that Amberden p. 3, [0049] discloses this operation. This is incorrect. The cited paragraph only describes a connection between repository databases. There is no connection of a client to a mapping service runtime. There is no description of using an application context to determine what services are available to the client.

Claim 64 further recites “a detach operation that tears down the persistent connection created by the attach operation.” The Office Action contends that Amberden p. 11 [0210] shows this feature. This is incorrect. [0210] describes use of a desktop version of the Amberden repository system. The cited paragraph only describes disconnection of users from the Internet. It does not say that Amberden provides a detach operation as claimed.

Claim 64 further recites “an open operation that creates one or more non-persistent channels within the connection that is created by the attach operation.” The Office Action contends that Amberden shows this feature at p. 8, [0160]. This is incorrect. [0160] mentions an



“open context” that “sets visibility to an entire organization.” There is no description of a channel within a connection.

For these features of Claim 64, the Office Action appears to rely on finding the keywords “connection,” “disconnected,” and “open” in Amberden. This is an over-broad reading of Amberden that ignores all the other terms of the claim. Such a rationale cannot support an anticipation rejection, in which the reference must show every claimed step, element, or imitation.

Claim 64 further recites “a close operation that terminates the one or more non-persistent channels that are created by the open operation.” The Office Action relies on Amberden p. 11, [0210]. This is incorrect. [0210] describes use of a desktop version of the Amberden repository system. The cited paragraph only describes disconnection of users from the Internet. It does not say that Amberden provides a close operation as claimed.

Claim 64 recites “a resolve operation that returns to the client a set of events ...” The Office Action relies on Amberden p. 7, [0144]. This is incorrect. [0144] describes repository APIs. There is no resolve operation. There is no operation that returns events to the client. Moreover, the Office Action entirely ignores the rest of the claim step, which recites that the events are “publish” events and “subscribe” events. Amberden has no disclosure of publish events or subscribe events whatsoever, because Amberden does not describe any form of event bus or event service.

The remaining rationale of the Office Action with respect to the other features Claim 64 is incorrect for the same reasons given above with respect to Claim 21. The tables of Amberden pp. 13-17, [0047], and FIG. 12 do not support the rationale. Where, in FIG. 12, is a description of the client receiving all events for a logical group that includes the client, without the client

storing a list of the groups and without knowing what events are pertinent? There is no such description.

For all the foregoing reasons, the rejection of Claim 64 under §103 is unsupported in the references. Reversal of the rejection is respectfully requested.


## **VII. CONCLUSION AND PRAYER FOR RELIEF**

Based on the foregoing, it is respectfully submitted that the rejection of Claims 21, 2-7, 18-24, 25-30, 41-49, 60-62, and 64 lacks the requisite legal and factual basis. Appellants therefore respectfully request that the Honorable Board reverse the rejection of Claims 21, 2-7, 18-24, 25-30, 41-49, 60-62, and 64 under 35 U.S.C. § 103 over Amberden in view of "AAPA."

The fee of \$500 under 37 C.F.R. §41.20(b)(2) is enclosed. If the fee is missing or insufficient, the Director is hereby authorized to charge any applicable fee to our Deposit Account No. 50-1302.

Respectfully submitted,

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## **CLAIMS APPENDIX**

2. A method as recited in Claim 21, wherein sending information comprises subscribing the router to all the events that are in the mapping and associated with the router at an event gateway that is coupled to the event bus.
3. A method as recited in Claim 21, further comprising the steps of receiving application-specific mapping information from an application program and updating the mapping using the application-specific mapping information.
4. A method as recited in Claim 2, further comprising the steps of receiving application-specific mapping information from an application program in XML format using a data access component that transforms the application-specific mapping information from XML format into a canonical object model format.
6. A method as recited in Claim 21, wherein sending information comprises generating, based on the mapping, a list of all the events that are in the mapping and associated with the router, and sending the list to an event gateway that is coupled to the event bus.
7. A method as recited in Claim 21, wherein the mapping comprises an association of stored values that identify for each of the routers, an application, a group identifier, an event of the one or more events, a network device identifier, one or more published events, and one or more subscribed events.
18. A method as recited in Claim 21, wherein receiving the device identifier comprises receiving a publish request that includes a router identifier for one of the network devices in the logical group or a group identifier of the logical group, and an event identifier.

19. A method as recited in Claim 18, wherein sending information comprises looking up the router identifier, or the group identifier, and the event identifier in the mapping and receiving a subject list in response thereto.
20. A method as recited in Claim 18, wherein sending information comprises looking up the router identifier, or the group identifier, and the event identifier in the mapping, receiving a subject list in response thereto, and applying the subject list to the router at the event gateway.
21. A method of automatically subscribing a router in a network to a plurality of events applicable to a logical group of which the router is a member, comprising the computer-implemented steps of:
  - creating and storing a mapping that associates a plurality of routers with the logical group and that associates the logical group with one or more events that can pass over an event bus to which the router communicates;
  - receiving a subscribe request from the router that includes a router identifier that uniquely identifies the router and an event identifier;
  - looking up the router identifier and the event identifier in the mapping;
  - receiving a subject list in response thereto, wherein the subject list identifies all subjects to which the router should subscribe;
  - sending information to the event bus that requests the event bus to subscribe the router to all events in the subject list.
22. A computer-readable medium carrying one or more sequences of instructions for automatically subscribing a router of a packet-switched network to a plurality of events applicable to a logical group of which the router is a member, which instructions, when executed by one or more processors, cause the one or more processors to carry out the steps of:
  - creating and storing a mapping that associates a plurality of routers with the logical group and that associates the logical group with one or more events that can pass over an event bus to which the router is logically coupled;

receiving a device identifier of one of the routers in the logical group;  
receiving an event that is among the one or more events that are in the mapping;  
based on the mapping, sending information to the router that causes the router to receive  
all events that are associated in the mapping with the logical group in which the  
router participates.

23. An apparatus for automatically subscribing a router of a packet-switched network to a plurality of events applicable to a logical group of which the router is a member, comprising:  
means for creating and storing a mapping that associates a plurality of routers with the logical group and that associates the logical group with one or more events that can pass over an event bus to which the router is logically coupled;  
means for receiving a device identifier of one of the routers in the logical group;  
means for receiving an event that is among the one or more events that are in the mapping;  
means for, based on the mapping, sending information to the router that causes the router to receive all events that are associated in the mapping with the logical group in which the router participates.
24. An apparatus for automatically subscribing a router to a plurality of events applicable to a logical group of which the router is a member, comprising:  
a network interface that is coupled to the data network for receiving one or more packet flows therefrom;  
a processor;  
one or more stored sequences of instructions which, when executed by the processor, cause the processor to carry out the steps of:  
creating and storing a mapping that associates a plurality of routers with the logical group and that associates the logical group with one or more events that can pass over an event bus to which the router is logically coupled;  
receiving a device identifier of one of the routers in the logical group;  
receiving an event that is among the one or more events that are in the mapping;

based on the mapping, sending information to the router that causes the router to receive all events that are associated in the mapping with the logical group in which the router participates.

25. The computer-readable medium recited in Claim 22, wherein sending information to the router that causes the router to receive all events comprises the steps of subscribing the router to all the events that are in the mapping and associated with the router at an event gateway that is coupled to the event bus.
26. The computer-readable medium recited in Claim 22, wherein the method further comprises the steps of receiving application-specific mapping information from an application program and updating the mapping using the application-specific mapping information.
27. The computer-readable medium recited in Claim 25, wherein the method further comprises the steps of receiving application-specific mapping information from an application program in XML format using a data access component that transforms the application-specific mapping information from XML format into a canonical object model format.
29. The computer-readable medium recited in Claim 22, wherein sending information to the router that causes the router to receive all events comprises the steps of generating, based on the mapping, a list of all the events that are in the mapping and associated with the router, and sending the list to an event gateway that is coupled to the event bus.
30. The method recited in Claim 22, wherein the mapping comprises an association of stored values that identify for each router, an application, a group identifier, an event of the one or more events, a network device identifier, one or more published events, and one or more subscribed events.

41. The computer-readable medium recited in Claim 22, wherein receiving the device identifier comprises receiving a publish request that includes a router identifier for one of the routers in the logical group or a group identifier of the logical group, and an event identifier.
42. The computer-readable medium recited in Claim 41, wherein sending information to the router that causes the router to receive all events that are associated in the mapping with the logical group in which the router participates ordering comprises looking up the router identifier, or the group identifier, and the event identifier in the mapping and receiving a subject list in response thereto.
43. The computer-readable medium recited in Claim 41, wherein sending information to the router that causes the router to receive all events that are associated in the mapping with the logical group in which the router participates ordering comprises looking up the router identifier, or the group identifier, and the event identifier in the mapping, receiving a subject list in response thereto, and applying the subject list to the router at the event gateway.
44. The apparatus recited in Claim 24, wherein sending information to the router that causes the router to receive all events comprises the steps of subscribing the router to all the events that are in the mapping and associated with the router at an event gateway that is coupled to the event bus.
45. The apparatus recited in Claim 24, wherein the method further comprises the steps of receiving application-specific mapping information from an application program and updating the mapping using the application-specific mapping information.
46. The apparatus recited in Claim 44, wherein the method further comprises the steps of receiving application-specific mapping information from an application program in XML

format using a data access component that transforms the application-specific mapping information from XML format into a canonical object model format.

48. The apparatus recited in Claim 24, wherein sending information to the router that causes the router to receive all events comprises the steps of generating, based on the mapping, a list of all the events that are in the mapping and associated with the router, and sending the list to an event gateway that is coupled to the event bus.
49. The apparatus recited in Claim 24, wherein the mapping comprises an association of stored values that identify for each router, an application, a group identifier, an event of the one or more events, a router identifier, one or more published events, and one or more subscribed events.
60. The apparatus recited in Claim 24, wherein receiving the router identifier comprises receiving a publish request that includes a router identifier for one of the routers in the logical group or a group identifier of the logical group, and an event identifier.
61. The apparatus recited in Claim 60, wherein sending information to the router that causes the router to receive all events that are associated in the mapping with the logical group in which the router participates ordering comprises looking up the router identifier, or the group identifier, and the event identifier in the mapping and receiving a subject list in response thereto.
62. The apparatus recited in Claim 60, wherein sending information to the router that causes the router to receive all events that are associated in the mapping with the logical group in which the router participates ordering comprises looking up the router identifier, or the group identifier, and the event identifier in the mapping, receiving a subject list in response thereto, and applying the subject list to the router at the event gateway.



64. A computer-readable medium carrying a mapping service client Application Program Interface (API) comprising: instructions for a set of invokable operations that allow a client application program hosted in a router access to a mapping service runtime, wherein the invokable operations including at least
- an attach operation that allows the client to open a persistent connection to the mapping service runtime, the attach operation receives one parameter, having at least an application context that is used to determine a mechanism available to the client;
  - a detach operation that tears down the persistent connection created by the attach operation;
  - an open operation that creates one or more non-persistent channels within the connection that is created by the attach operation;
  - a close operation that terminates the one or more non-persistent channels that are created by the open operation; and
  - a resolve operation that returns to the client a set of events, wherein the set of events is a combination of zero or more publish events and zero or more subscribe events, wherein the combination included in the set of events returned by the resolve operation is based on a specified selection criteria, and wherein the selection criteria includes at least a device identification, an event subject, and an action desired; and
- wherein the mapping runtime service causes the client to receive all events that are associated with a logical group that includes the client, without the client having to store a list of the logical groups in which the client participates and without having to know what events pertain to the client or the logical groups.